

NEW ENGLAND NOTE

ON THE OCCURRENCE OF *ARISAEMA DRACONTIUM*
IN HAMPSHIRE COUNTY, MASSACHUSETTS

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ABSTRACT

Arisaema dracontium (L.) Schott has been historically considered rare in Massachusetts. Recent field studies in selected floodplain forests in Hampshire Co. indicate that *A. dracontium* is more abundant than was previously believed.

Key Words: *Arisaema dracontium*, floodplain forests, Hampshire Co., Massachusetts

Green dragon, *Arisaema dracontium* (L.) Schott (Araceae), was historically considered rare in Massachusetts (Williams, 1910; Livingston, 1964) and is currently listed as "threatened" (Sorrie, 1987) in the state. This apparent scarcity has probably been caused by the extensive conversion of floodplain forest and alluvial meadows into cropland (Sorrie, 1987).

Previously known from nine locations in Hampshire Co., Massachusetts, *Arisaema dracontium* was located and last collected along the Connecticut River in Northampton by H. E. Ahles in 1978 (Ahles 86320, MASS). Subsequent attempts to re-locate this station, however, were unsuccessful (B. Sorrie, pers. comm.; M. Rohman, pers. comm.). As of spring, 1988, only one extant Hampshire Co. population of *A. dracontium*, comprised of a few individuals along the Mill River in Northampton, was known (J. Anderson, pers. comm.).

During June, 1988, I attempted to locate populations of *Arisaema dracontium* by making thorough searches of Connecticut River floodplain forests and their borders in Hampshire Co. After re-locating two historic populations in Northampton, I noticed that they shared distinct similarities in their surrounding flora and in their location with respect to flood levels and topographic features.

Within and bordering the floodplain forest communities, *Arisaema dracontium* was observed growing in the narrow transition zone between those areas which remain wet later into the summer and the drier uplands. Green dragons were found rimming the depressions which act as temporary pools, as well as in low spots

on river terraces and amidst tree falls where flood debris had accumulated.

Using this information, I consulted U.S.G.S. topographic maps in order to identify similar floodplain forests. By combining these map data with historical records and field work, seven distinct populations were found.

The *Arisaema dracontium* populations were found along the floodplain of the Connecticut River in Hatfield (1), Hadley (1), and Northampton (4), and along the Mill River floodplain in Northampton (1). Five are new stations. Two of these stations contain over 500 blooming individuals and are therefore among the largest populations in the state.

The soil type at most of the sites was either Limerick silt loam or Hadley silt loam (Swenson, 1981). In adjacent floodplain forests characterized by Winooski silt loam or Suncook loamy, fine sand, such as Rainbow Beach in Northampton and west of Mitch's Marina in Hadley, MA, no *Arisaema dracontium* was found.

With few exceptions, *Arisaema dracontium* was growing in areas which were sparsely vegetated. Associated understory plants nearby were *Onoclea sensibilis* L., *Matteuccia struthiopteris* (L.) Todaro, *Impatiens capensis* Meerb., *Apios americana* Medic., *Boehmeria cylindrica* L., *Vitis* sp., *Parthenocissus quinquefolia* (L.) Planch., *Laportea canadensis* (L.) Wedd., *Lysimachia ciliata* L., *L. nummularia* L., *Arisaema triphyllum* var. *stewardsonii* (Britt.) Stevens, *A. triphyllum* var. *triphyllum* (L.) Schott, *Rhus radicans* L., *Smilax herbacea* L., and *Sambucus canadensis* L. The overstory was usually dominated by *Acer saccharinum* L.; other canopy trees were *Salix nigra* Marsh., *Populus deltoides* Marsh., and *Fraxinus pennsylvanica* Marsh.

Arisaema dracontium is therefore more abundant in Hampshire Co. than previously believed. Whether these newly located populations represent old established populations formerly overlooked or are the result of an expansion of *A. dracontium* within its range is presently unknown.

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